

June 1989

NUCLEAR SCIENCE

DOE Richland Role in the Proposal to Convert Washington Nuclear Plant No. 1



545664 / 39 029



United States
General Accounting Office
Washington, D.C. 20548

Resources, Community, and
Economic Development Division

B-233552

June 6, 1989

The Honorable George Miller
Chairman, Subcommittee on Water, Power
and Offshore Energy Resources
Committee on Interior and Insular Affairs
House of Representatives

The Honorable Peter A. DeFazio
House of Representatives

On October 20, 1988, you requested information on a number of issues involving the Department of Energy's (DOE) possible acquisition and conversion of a partially completed commercial nuclear power plant to a defense production reactor that would produce material for use in the nuclear weapons program of the United States. Washington Nuclear Plant No. 1 (WNP-1)--owned by the Washington Public Power Supply System (Supply System)--is located on DOE's Hanford Reservation near Richland, Washington. However, the ownership of the plant and its power-generating capability involve unique and complex legal and institutional issues that have raised questions about whether DOE can acquire WNP-1 in a timely, cost-effective manner. The Manager of DOE's Richland Operations Office (the Richland Manager) commissioned a study in June 1987 to further examine these legal and institutional issues.

In March 1989, we reported the results of our work on some of the WNP-1 issues of interest to you--Nuclear Science: The Effect of Conversion of Washington Nuclear Plant No. 1 on Debt and Electric Rates (GAO/RCED-89-88FS, Mar. 9, 1989). For this report, we agreed with your office to provide you with answers to the remaining questions:

- Under what legal authority did the Richland Office commission the study of WNP-1 conversion entitled "Analysis of Legal and Institutional Issues in Acquiring the Washington Public Power Supply System's Partially Completed Light Water Reactor (WNP-1) for a Department of Energy Production Reactor," which was issued

September 17, 1987?¹ Were any laws or DOE rules, procedures, or guidelines violated by personnel in the Richland Office when it commissioned the study?

- Is it considered to be normal practice for a DOE field office to commission a study that includes draft legislation (a requisite for obtaining funding to acquire and convert WNP-1) without a specific authorization from the Office of the Secretary of Energy?
- Did the Secretary of Energy specifically authorize the Richland Office to commission the September 17, 1987, legal study? When did the Secretary and/or the Under Secretary of Energy learn of the existence of this study?
- Are the conclusions (which are based on the assumptions, facts, and analysis presented by the study's authors) contained in the September 17, 1987, WNP-1 study valid?

In summary, based principally on our review of the DOE Inspector General's work, as well as our own investigation, we found the following:

- The Richland Manager acted within his broad management and procurement authority and followed prescribed DOE procurement procedures to commission the WNP-1 study, and DOE Richland Office personnel violated no laws or DOE procedures in commissioning the WNP-1 study.
- The study's inclusion of draft legislation required no specific authorization beyond that of the Richland Manager. Although it is common for DOE to suggest draft legislation, DOE normally composes such draft legislation in-house rather than commissioning it outside DOE.
- The Secretary of Energy did not specifically authorize the Richland Office to commission the WNP-1 study. However, the Richland Manager was not required to and chose not to seek approval or notify the Secretary or Under Secretary (the Manager's immediate supervisor) or other headquarters officials before initiating the study on June 4, 1987. The Richland Manager and some of the

¹The study (referred to as the WNP-1 study) was prepared under contract by Davis Wright and Jones; Lindsay, Hart, Neil, and Weigler; R. L. Ferguson and Assoc.; and John Nuveen and Co., Inc.

WNP-1 study contractors briefed headquarters nuclear materials program officials on August 18, 1987, when the study was in draft. Headquarters officials then notified the Under Secretary on August 19, 1987. Between August 21 and September 10, 1987, the Richland Manager, the study contractors, and a local business consortium distributed copies of the draft results outside DOE to Members of Congress, congressional staff, and executive branch officials. However, the Secretary of Energy did not become aware of the study until September 14, 1987, when he was presented with a draft copy by two Members of Congress. The Secretary became concerned that he had not been informed of the study and that draft results had been released for outside distribution. He therefore ordered the DOE Inspector General to investigate the circumstances of the study and its distribution.

We also examined the WNP-1 study and found the following:

- The authors of the WNP-1 study analyzed the method, the length of time, and the cost required for DOE to acquire WNP-1. They concluded that DOE can acquire the plant by condemnation, and this action would not constitute an "event of default" affecting the bonds that were used to finance construction of the plant. We have previously reported that we agree with this conclusion.² The authors also concluded that acquisition of WNP-1 is likely to take about 1 year, but not more than 2 years, to complete and is likely to cost \$150 million or less. The authors concede, however, that appeals could add time to the acquisition process. With regard to the value of WNP-1, although the authors' estimate may be plausible, they acknowledge, and we agree, that it is difficult to predict with any accuracy how a court in the condemnation proceeding might determine the value of WNP-1, given the unique set of circumstances surrounding its ownership. Furthermore, the authors admit that their conclusions are largely based on the assumption that the Congress will pass specific draft legislation included in the study. With regard to the authors' assumption, we

²Nuclear Science: Questions Associated With Completing WNP-1 as a Defense Materials Production Reactor (GAO/RCED-88-221, Sept. 21, 1988), Nuclear Science: Issues Associated With Completing WNP-1 as a Defense Materials Production Reactor (GAO/RCED-88-222, Sept. 21, 1988), and Nuclear Science: Effect of Conversion of Washington Nuclear Plant No. 1 on Debt and Electric Rates (GAO/RCED-89-88FS, Mar. 9, 1989).

cannot predict whether the Congress would support this or similar WNP-1 legislation.

OBSERVATION

The Richland WNP-1 incident illustrates a headquarters-field office management relationship that should be brought to the attention of the new Secretary of Energy. That is, field managers, such as the Richland Manager, have broad discretionary authority that allows them to initiate significant activities without having to account for these activities to their headquarters superiors, including the Under Secretary and Secretary. For example, in this specific instance, the DOE Inspector General reported that the Richland Manager's broad authority and DOE's lack of internal controls regarding field managers allowed the Richland Manager to initiate the WNP-1 study and make significant use of the study results without approval or knowledge of DOE headquarters. Our investigation of this matter, in addition to our previous work at other DOE field offices and laboratories, indicates that the Richland incident is not a unique example of the existing management relationship between DOE headquarters and its field operations. Furthermore, the Inspector General reported that although its inspection focused on this single matter at one location, these operating and management conditions may be inherent in the way DOE does business.

Sections 1 and 2 contain a more detailed discussion of the results of our work. Appendix I contains a chronology of events relating to the Richland WNP-1 study, appendix II contains the scope and methodology of our work, and appendix III lists the major contributors to this briefing report.

Unless you publicly announce its contents earlier, we plan no further distribution of this briefing report until 30 days from the date of this letter. At that time, we will send copies to the Secretary of Energy and other interested parties. Copies will also be made available to others upon request. If you have any questions, please contact me at (202) 275-1441.



Keith O. Fultz
Director, Energy Issues

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ABBREVIATIONS

BPA	Bonneville Power Administration
DOE	Department of Energy
GAO	General Accounting Office
IG	Department of Energy's Inspector General
PNL	Battelle Pacific Northwest Laboratories
TRIDEC	Tri-Cities Industrial Development Council
UNC	UNC Nuclear Industries
WHC	Westinghouse Hanford Company
WNP	Washington Nuclear Plant

SECTION 1

CIRCUMSTANCES SURROUNDING RICHLAND'S

COMMISSIONING OF THE WNP-1 STUDY

In June 1987, the Department of Energy's (DOE) Richland Operations Office Manager (Richland Manager) commissioned a study to analyze the legal and institutional issues involved with DOE's possible acquisition and conversion of Washington Nuclear Plant No. 1 (WNP-1) to a defense production reactor. He told us that he did this because of his concern over the dwindling nuclear materials production capability of the United States and his belief that the feasibility of the WNP-1 as a nuclear materials production option had not been adequately studied. However, before the study was finalized, the Richland Manager, DOE contractors, and a local business consortium briefed certain Members of Congress, congressional staff, and executive branch officials on the draft results of the study and distributed copies of the draft results at many of these briefings.

This section discusses the background for the WNP-1 study, the Richland Manager's authority to commission the study, the study's inclusion of draft legislation, notification of DOE management concerning the study, and the status of the DOE decision on the WNP-1 option.

BACKGROUND--REASON FOR THE STUDY

The WNP-1, owned by the Washington Public Power Supply System (the Supply System), is located on DOE's Hanford Reservation near Richland, Washington. The WNP-1 facility is currently unfinished and idle. Construction was halted in 1982 mainly because of a decrease in the demand for electric power and financial difficulty, and uncertainty exists as to whether WNP-1 will be completed.¹ Proponents of the proposal to acquire and convert WNP-1 believe that DOE's conversion of WNP-1 to a defense production reactor will help maintain needed nuclear material supply levels pending the completion of planned new production reactors.

The Supply System's ownership of WNP-1, however, involves a number of complex and unusual legal and contractual agreements. For example, although the Supply System owns the physical structure for WNP-1, construction was financed with tax-exempt, long-term revenue bonds that are secured by WNP-1 revenues and not the physical structure. In addition, the Bonneville Power

¹DOE has said that if it acquires WNP-1, it will most likely complete the power-generating capability of WNP-1, thus making it a dual-purpose--production and power--reactor.

Administration (BPA)--an agency of DOE--acquired the right to WNP-1's electric power from the Supply System through a Net Billing Agreement.² In exchange, BPA agreed to pay the total annual costs of maintaining WNP-1 (including bond principal and interest) whether or not WNP-1 is ever completed or becomes operational. BPA, in turn, passes the payment of these WNP-1 costs onto its current customers and ratepayers. These unique and complex ownership and liability circumstances have raised questions as to whether DOE can acquire and convert WNP-1 in a timely manner and at a reasonable cost. The DOE Richland Manager told us he commissioned the WNP-1 study to help resolve these questions.

A local business consortium and DOE headquarters had previously studied DOE's possible acquisition and conversion of WNP-1. According to a DOE Inspector General (IG) inspection report,³ the Tri-City Industrial Development Council (TRIDEC--a local business consortium of which the Hanford contractors and some subcontractors are members)⁴ independently developed a proposal in the summer of 1986 for DOE to acquire and convert one of the Supply System's unfinished commercial reactors to a defense production reactor. The Richland Manager told the IG that DOE headquarters took the position, at that time, that the TRIDEC proposal was not attractive to DOE. During this period, TRIDEC briefed the U.S. Senators and some of the U.S. Representatives from Washington State and presented them with a paper entitled "An Opportunity to Be Seized" addressing TRIDEC's proposal for DOE to acquire and convert WNP-1. Subsequently, in July 1986, the two U.S. Senators and a U.S. Representative from Washington State approached the Secretary of Energy to request that DOE evaluate the possible acquisition of WNP-1. In August 1986, the Under Secretary set up a Steering Committee and Task Groups to do an internal study of the technical feasibility and the legal and institutional issues of

²This agreement, referred to as the Net Billing Agreement, involves the Supply System, BPA, and 104 WNP-1 participants--public and cooperative-owned utility companies (BPA's wholesale customers).

³IG Inspection Report: Development of Certain Studies of Issues Regarding Acquiring WPPSS WNP-1 Reactor for a Department of Energy Production Reactor (Dec. 3, 1987).

⁴TRIDEC is a consortium of companies of businessmen in the Richland, Pasco, and Kennewick, Washington, area. Members pay dues.

acquisition and conversion of WNP-1.⁵ According to the Richland Manager, DOE concluded that conversion of WNP-1 was technically feasible, but that uncertainties existed concerning the legal and institutional issues, mainly affecting the cost and time that might be required to acquire WNP-1. The Richland Manager believed that a more detailed study of these legal and institutional issues would clear up these uncertainties. DOE headquarters officials told us, however, that they were more concerned that there was no unified support in the Northwest for DOE's possible acquisition and conversion of WNP-1.

RICHLAND HAD AUTHORITY AND
FOLLOWED PRESCRIBED PROCEDURES
TO COMMISSION THE STUDY

Based principally on our review of the DOE IG's work, as well as our own investigation, we found that the Richland Manager had the authority to commission the WNP-1 study, and Richland personnel followed prescribed laws and DOE procedures to commission the study.

According to DOE's Assistant Secretary for Management and Administration, the Richland Manager acted within the scope of his broad management and delegated procurement authority to commission the WNP-1 study, which cost approximately \$368,000. The cited WNP-1 study was only part of the Richland WNP-1 initiative, which cost in total \$1.124 million.⁶ The Assistant Secretary stated that the Richland Manager's procurement authority extends to \$25 million and his management authority is stated in his position description approved by DOE's Executive Review Board and in program guidance from DOE's Office of Nuclear Materials Production.⁷ Both of these documents give the Richland Manager the authority and

⁵The Under Secretary established a Steering Committee (now inactive) to evaluate all institutional, contractual, legal, legislative, financial, and scheduling issues associated with the acquisition and operation of WNP-1 by DOE to produce nuclear materials for national security programs. The Steering Committee developed brief issue papers on these subjects and then curtailed their activities in late February 1987.

⁶Other studies included technical studies by PNL, R.L. Ferguson & Associates, and Bechtel National, Inc., and a review of the nonproliferation issues involved with converting WNP-1 to a production reactor by International Energy Associates Limited.

⁷The extent of the authority of other field managers is similar to Richland's.

responsibility to plan, develop, and ensure the production of nuclear materials.⁸

The DOE Hanford Reservation is a government-owned, contractor-operated facility, and according to the Assistant Secretary for Management and Administration and the DOE IG, the Richland Manager followed prescribed DOE procurement procedures to assign the WNP-1 study to Hanford's Management and Operating Contractor, UNC Nuclear Industries (UNC), on June 4, 1987. (The Westinghouse Hanford Company (WHC) assumed UNC's operation at Hanford on June 29, 1987.) UNC (later WHC) issued a task order to another Richland contractor--Battelle Pacific Northwest Laboratories (PNL)--to study the legal and institutional issues involved with WNP-1's acquisition and conversion. PNL, in turn, contracted with a local private attorney to address the legal, financial, legislative, and power-marketing issues associated with acquisition and completion of WNP-1. The PNL contract with the attorney was a sole-source procurement contract (noncompetitive) justified by PNL because of Richland's need for quick results and the attorney's legal expertise and familiarity with the WNP-1 issues.⁹ During the contracting process, the attorney disclosed that his firm had been previously involved with work for the WNP-1 Bond Trustee and expected to perform further work in the future for the WNP-1 Bond Trustee on WNP-1 issues. However, the PNL contracting officer told us that PNL was not concerned with the attorney's firm's relationship with the Bond Trustee because the attorney's contract with PNL included a general organizational conflict-of-interest clause and the attorney signed a declaratory statement pledging no organizational conflict of interest. The Richland DOE contracts officer told us he did not review this PNL contract because it is below the dollar value cut-off point for selection for review. He said that the Richland DOE contracts group reviews noncompetitive contracts entered into by DOE Hanford contractors if they exceed \$500,000 and competitive contracts if they exceed \$5 million.

Funding for the WNP-1
Study Reviewed by DOE IG

The WNP-1 study was paid for with funds from the WHC management reserve account. DOE's Inspector General (IG) reported that the management and operations contractor allocates 1 to 2 percent of its annual Richland DOE operating expense budget to this account to fund unanticipated work scope changes. DOE Richland officials told us that at the time funding was being sought for the

⁸Managers at other DOE production facilities have similar responsibilities regarding the production of nuclear materials.

⁹The attorney was, at one time, the General Counsel for the DOE Richland Operations Office.

WNP-1 study, the reserve account had coincidentally been increased in anticipation of the need to fund the consolidation of some contractor activities at Hanford.¹⁰ The account contained enough money to fund this consolidation and also the entire WNP-1 initiative costing \$1.124 million.¹¹

The DOE IG audit group examined Richland's funding of the WNP-1 study.¹² The IG reported that the Richland Office had directed a Hanford support (construction services) contractor in 1986 to increase its billing rates (overcharge) to Hanford operating contractors to provide for anticipated consolidation costs.¹³ Subsequently, in June 1987, Richland directed the support contractor to refund these overcharges to the operating contractors. The overcharges returned to WHC were placed in the reserve account. Enough money was returned not only to pay for the consolidation costs but also to fund the Richland WNP-1 initiative.

The IG found no evidence that the Richland-directed overcharges originally were intended to fund the WNP-1 study. In addition, the IG's review of the prime contractor and subcontractor records associated with the WNP-1 initiative disclosed no unallowable costs. The IG report concluded that the WNP-1 study was "authorized and managed in a manner consistent with other Westinghouse projects."

However, while investigating the WNP-1 study issue, the IG discovered that the Richland Office and its management and operating contractors were using unacceptable costing and funding practices in connection with the year-end adjustment (to compensate for any overcharges or undercharges) of support contractor charges, and these practices led to charging costs to the wrong accounting periods. The IG also took exception to Richland's method of financing its consolidation effort. The IG said that items such as

¹⁰DOE Richland ordered this consolidation of contractor activities at Hanford to save money and increase efficiency.

¹¹The WNP-1 study comprises about one-third of this total cost.

¹²IG Audit Report: Richland Operations Office Procedures for Funding the WNP-1 Project Study and Allowability of Associated Costs Incurred (Nov. 22, 1988).

¹³Historically, Hanford support contractors have billed the operating contractors for indirect expenses (administrative salaries, supplies, etc.) on the basis of estimated rates. The IG audit group stated that the use of estimated rates to recover indirect expenses is common in industry with appropriate adjustments at year-end for rates that were too high (overcharge) or too low (undercharge).

projected consolidated costs should be budgeted as separate line items rather than using unique practices, such as increasing contractor overhead rates, to cover such costs. The IG recommended that Richland

- discontinue the practice of carrying forward construction service contractors' overcharged and undercharged indirect expense amounts, and
- develop budgetary processes for construction service contractors that avoid obscure methods to produce funding for foreseeable needs such as contractor consolidation.

According to DOE's Audit Liaison Office, in April 1989, Richland and DOE headquarters were still determining what action would be taken on the IG's recommendations.

STUDY'S INCLUSION OF DRAFT LEGISLATION NOT UNUSUAL

The Richland Manager told us that he ordered the study to include draft legislation because such legislation would be required to obtain funding to acquire and convert WNP-1, and he believed that the draft legislation would help demonstrate to DOE headquarters and the Congress the feasibility of the WNP-1 option. DOE officials told us it is not uncommon to include suggested legislation in a study; there is no requirement for a field manager to get authorization to include it; and suggestions for any needed legislation are routinely solicited from field managers by DOE headquarters. However, DOE officials also told us that draft legislation is usually written by DOE officials and not contractors. In this case, the legislation that was drafted by the contractor for the WNP-1 legal study was reviewed and approved by Richland DOE officials.

HEADQUARTERS PERSONNEL NOTIFIED AFTER STUDY WAS COMPLETED

The Richland Manager did not seek specific authorization and did not notify DOE headquarters program officials, the Under Secretary, or Secretary of the initiation of this study. However, according to DOE headquarters officials, the broad authority granted to field operations managers permits these managers considerable discretion, and DOE internal controls do not require headquarters authorization and notification prior to undertaking initiatives such as the WNP-1 study.¹⁴ The Richland Manager told

¹⁴Internal controls that federal agencies are required to follow are contained in GAO's Standards for Internal Controls in the Federal Government, published in 1983 pursuant to the Federal Managers' Financial Integrity Act of 1982 (31 U.S.C. 3512(b)).

us he normally reports to pertinent headquarters defense program managers on such matters and not to the Under Secretary (his immediate supervisor) or the Secretary. He told us that he authorized the study on June 4, 1987, and arranged to brief defense program and other DOE headquarters officials in early August 1987, shortly after the draft results of the study become available. (See app. I for chronology of events.)

The Under Secretary was not included in these briefings but found out about the study from the General Counsel's Office. He then called the Richland Manager on August 19, 1987, to tell him to brief the WNP-1 Steering Committee and to keep the draft study results inside DOE.¹⁵ However, on August 21, the Richland Manager briefed a U.S. Representative from Washington State and gave him a copy of the study's draft results. In addition, between August 21, 1987, and September 11, 1987, WHC, PNL, and TRIDEC (of which these contractors are members) briefed individuals outside DOE and gave them copies of the draft results. According to the DOE IG, the Richland Manager knew of many of these briefings and the distribution of the draft copies of the study.

The Secretary found out about the study on September 14, 1987, when he was given draft copies of the study by two Members of Congress. The Secretary, concerned by this incident, told the Under Secretary to order an IG investigation of the circumstances of the study and its distribution outside DOE. The IG inspection group found that three factors allowed the Richland WNP-1 initiative to proceed as it did.

- "The Rights in Technical Data-Facility" clauses within the Richland Management and Operating contracts allow contractors to use data generated under the contract for private purposes.¹⁶
- The Operations Office Manager (i.e., the Richland Manager) appears to have substantial discretion to make funding

¹⁵The Richland Manager said he sensed from the conversation with the Under Secretary that going outside DOE with the draft study results would not be appropriate. He did not tell the Under Secretary of his scheduled briefing of a U.S. Representative from Washington State.

¹⁶Under this clause a DOE contractor has the "right to use for its private purposes--subject to patent, security, or other provisions of this contract--technical data it first produces in performance of this contract provided that data requirements of this contract have been met as of the date of the private use of such data." Technical data are defined as recorded information of a scientific or technical nature, such as research or engineering data.

adjustments and decisions that are not controlled by the budget process.

- DOE's internal controls regarding Operations Office Managers permitted the Richland Manager to initiate this study and make significant use of the study results without the approval or knowledge of DOE headquarters.

The IG said that although its inspection focused on this single matter at one location, these operating and management conditions "may be inherent in the way the Department conducts its business." The IG made no recommendations in this inspection report.

Release of Draft Results Outside DOE

On August 21, 1987, 2 days after his discussion with the Under Secretary, the Richland Manager, with the help of WHC and PNL personnel, briefed a U.S. Representative from Washington State, and the Richland Manager gave him a copy of the draft study. DOE headquarters officials were not informed of this briefing until later. The Richland Manager told us that he gave this outside briefing because it had been emphasized by headquarters officials in every meeting on WNP-1 that it was extremely important that the Washington congressional delegation (U.S. Senators and Representative from Washington State) be aware of and support DOE's WNP-1 efforts. According to the Richland Manager, DOE headquarters officials had told him that without this support, DOE could not and would not act on WNP-1. (DOE headquarters officials confirmed this to us.) Thus, according to the Richland Manager, he felt compelled to share the results of the WNP-1 study with members of the delegation so that they could determine the viability and feasibility of the WNP-1 option.

According to the Richland Manager, the contractors from WHC and PNL who attended the meeting and helped brief the Representative believed it was alright for them to subsequently distribute copies outside DOE when they saw the Manager do this. According to the Richland Manager, when the contractors saw him (the Manager) give copies to someone outside DOE, they believed the data had been released for their private use under the "Rights in Technical Data-Facility" clause of their contracts with DOE. Moreover, PNL told us that the WNP-1 study contractors believed that they had the Richland Manager's approval to release copies of the draft study results to Members of Congress. WHC, PNL, and other members of TRIDEC subsequently briefed other representatives of Congress and government agencies and provided these individuals

with copies of the draft study.¹⁷ The Richland Manager was aware of many of these briefings.

On September 14, 1987, a U.S. Senator and a U.S. Representative from Washington State met with the Secretary and gave him draft copies of the WNP-1 study. They had received copies from TRIDEC and the Richland Manager, respectively. This was the first time the Secretary had seen the study. After the meeting, the Under Secretary called the Richland Manager to inform him that the Secretary planned to order an IG investigation into the circumstances of the study and its distribution. According to the Richland Manager, he (the Manager) then sent a letter to the Hanford contractors involved with the study saying that distribution of draft copies of the study outside DOE without prior approval should not have occurred and is not acceptable. Distribution subsequently stopped. The IG inspection report stated that prior to this letter, the Richland Manager had not placed any restrictions on WHC's and PNL's use of the draft study results. In summary, with regard to the distribution of the draft study, the IG stated the following:

"The RL (Richland) Manager personally gave the document to (a U.S. Congressman from Washington State); knew of the contractors' distribution of the document to other Members of Congress; and, knew that the document was to be sent to an OMB Budget Examiner. The RL Manager did not inform his superiors of these actions nor did he seek prior approval for these actions."

No apparent violation of
antilobbying restrictions

We also reviewed the applicability of antilobbying restrictions contained in 18 U.S.C. 1913 in connection with the use and distribution of the WNP-1 study results by the Richland Manager, the study contractors, and TRIDEC. This provision, as interpreted by the Department of Justice, prohibits the expenditure of appropriated funds to support a grass-roots lobbying effort, in which an attempt is clearly made to induce the public to persuade Members of Congress to support or oppose legislation. However, this provision does not prohibit federal agency representatives, such as the Richland Manager, from expending appropriated funds for the purpose of contacting Members of Congress to express their views on legislative matters.

¹⁷WHC and PNL told the IG that they took part in many of the briefings as members of TRIDEC rather than as DOE contractors, but as DOE contractors, they had in their possession copies of the WNP-1 study.

In the matter of the use of the study results by the study contractors and other members of TRIDEC to promote the WNP-1 option, the Richland Manager might have violated the antilobbying restrictions if he had either commissioned the study primarily as a lobbying tool for TRIDEC or directed TRIDEC to lobby Members of Congress. We found that although he was aware of many of TRIDEC's WNP-1 activities, there is no evidence from the IG's work or our investigation that he commissioned the study primarily for TRIDEC's use or that he directed TRIDEC to lobby for the WNP-1 option. Further, the IG investigation noted no evidence that the Richland Manager directed or asked the study contractors, in their private capacity, to conduct briefings on behalf of the WNP-1 option. According to the IG's inspection report, these contractors acted on their own as members of TRIDEC, and the costs incurred were not charged to the DOE contract.

STATUS OF THE DOE DECISION
ON THE WNP-1 OPTION

DOE officials told us that they agree with the findings of the Richland-commissioned WNP-1 study, which was officially issued on September 17, 1987. However, DOE has been considering options other than the acquisition and conversion of WNP-1. These options include proposed new heavy-water and modular high-temperature gas-cooled nuclear production reactors. The officials told us that DOE is reluctant to act on the WNP-1 option because there is little congressional support for this option even from some Members of Congress representing the Pacific Northwest.

SECTION 2

COMMENTS ON THE RESULTS OF THE WNP-1 STUDY

The authors of the WNP-1 study analyzed the method, length of time, and cost required for DOE to obtain WNP-1. They concluded that DOE can legally acquire the plant by condemnation, and this action would not constitute an "event of default" causing the bonds used to finance construction to become immediately due and payable. We have previously reported that we agree with this conclusion.¹ However, since litigation is likely if this acquisition proposal is implemented, the final resolution of these issues will presumably be made by the courts. The authors also concluded that DOE can legally acquire WNP-1, in 2 years or less, for \$450 million or less. In fact, they believe the acquisition is more likely to cost \$150 million or less and require about a year to complete. Although these estimates may be plausible, we believe they can be validated only through the results of the acquisition process itself, including the necessary judgments of the court or courts involved in this process. Further, the authors concede that much of their analysis is based on the assumption that the Congress will pass specific legislation (suggested in the study) to, among other things, authorize funding to acquire and convert WNP-1. We cannot predict whether the Congress would support this or similar WNP-1 legislation.

This section discusses the WNP-1 study's conclusions with regard to the method, time, and cost for acquiring WNP-1; and other issues, including the legality of converting WNP-1 (i.e., the Nuclear Non-Proliferation Treaty) and the study's suggested legislation regarding congressional approval for DOE's acquisition and conversion of WNP-1.

ACQUISITION THROUGH CONDEMNATION

We believe that the WNP-1 study presents a fairly accurate picture with respect to the acquisition method and risk of default of the bonds used to finance WNP-1. That is, DOE can legally acquire WNP-1 through the condemnation process, and this action will not result in an event of default causing the WNP-1 bonds to immediately become due and payable.

¹We previously published our opinion on the legality of DOE's possible acquisition and conversion of WNP-1--see Nuclear Science: Questions Associated With Completing WNP-1 as a Defense Materials Production Reactor (GAO/RCED-88-221, Sept. 21, 1988), Nuclear Science: Issues Associated With Completing WNP-1 as a Defense Materials Production Reactor (GAO/RCED-88-222, Sept. 21, 1988), and Nuclear Science: Effect of Conversion of Washington Nuclear Plant No. 1 on Debt and Electric Rates (GAO/RCED-89-88FS, Mar. 9, 1989).

Discussion

As discussed in our September 1988 reports and our March 1989 report, DOE has legal authority under various provisions to condemn real and personal property. Under 42 U.S.C. 2063, DOE can condemn any interest in facilities for the production of special nuclear materials.² In our view, this authority, standing alone, is sufficient to authorize DOE to condemn a partially completed nuclear power reactor that, when completed as a production reactor, would be capable of producing "special nuclear material."³ DOE could also use its authority under other provisions, including 42 U.S.C. 2201(g), 40 U.S.C. 257, and 40 U.S.C. 2222, to condemn WNP-1.

Under section 10.8(1) of Bond Resolution No. 769, the Supply System is permitted to sell WNP-1 (in its entirety) only if the Supply System receives a sufficient amount of money--approximately \$2.1 billion as of June 30, 1988--to pay all of the principal on the outstanding bonds, plus accrued interest. If the Supply System sells (or otherwise voluntarily conveys) WNP-1 for less than that amount, such action would risk an "event of default" under section 12.1 of the Bond Resolution, and the Bond Trustee could declare all bond principal immediately due and payable.

Condemnation by DOE, however, would not constitute an act of default under the terms of the Bond Resolution. Section 10.8(3) of the Bond Resolution provides that transfer of WNP-1 or any portion thereof "through the operation of law" is permissible and does not constitute a default. Thus, if a transfer of WNP-1 to DOE occurs through operation of law (condemnation), the Bond Trustee could not declare the outstanding bond principal immediately due and payable.⁴

²Originally, this authority was vested in the Atomic Energy Commission and was then transferred first to the Energy Research and Development Administration and then to DOE.

³We note that the term "special nuclear material," as defined in 42 U.S.C. 2014(aa) includes plutonium or enriched uranium, but does not include tritium. However, if a facility is capable of producing plutonium or enriched uranium in significant quantities, even if it is not primarily intended for that purpose, it could be condemned under this authority, in our view.

⁴A transfer of property "through operation of law" is generally defined as a transfer or conveyance that takes place without the cooperation or consent of the party involved. Thus, the Supply System would probably be obligated to contest such a condemnation in order to avoid allegations that a voluntary conveyance of WNP-1 was actually taking place.

As the WNP-1 study points out, DOE can follow one of two alternative procedures when it condemns real property.

- Without declaration of taking. Under 40 U.S.C. 257, DOE files a condemnation action, which would then proceed to final judgment on the issue of the amount of "just compensation" to be paid the owner. However, until the amount of just compensation in this type of ordinary condemnation is determined by the court and paid by DOE, DOE would not take title to the property and would be free to abandon the condemnation attempt. If the proceeding is abandoned, DOE would be liable for reasonable costs, disbursements, and expenses, including attorneys, appraisal, and engineering fees incurred by the owner (42 U.S.C. 4654(a)).

- Declaration of taking. Alternatively, DOE could rely on the authority set forth in 40 U.S.C. 258a-258f--the so-called Declaration of Taking Act. Under these provisions, the government is authorized, once a condemnation proceeding is instituted, to file a declaration of taking that states the authority under which and the public use for which the property is to be taken, a description of the property being taken, and a statement of the amount of money estimated to represent just compensation. Once the declaration of taking is filed and the estimated just compensation is deposited with the court, title to the property vests in the government. At that time, the government becomes irrevocably obligated to pay the final judgment as to the amount of just compensation, even if that amount exceeds its own estimate. In light of the irrevocable nature of the government's obligation to pay the ultimate award made by the court, the statute provides that a declaration of taking shall not be filed unless the head of the agency makes a determination that "the ultimate award probably will be within any limits prescribed by Congress on the price to be paid" (40 U.S.C. 258c).

Thus, the primary differences between an ordinary condemnation without declaration of taking and the declaration of taking condemnation procedure is that DOE could abandon an ordinary condemnation if it considered the amount of just compensation for WNP-1 as determined by the court to be excessive. But it could not do so if it filed a declaration of taking, even if the amount of just compensation greatly exceeded its own estimate or any congressionally imposed limitation.

The authors of the WNP-1 study recommend that DOE condemn WNP-1 without a declaration of taking. We believe that the use of a declaration of taking would be especially risky in light of the different possible methods that might be used in a condemnation proceeding to determine just compensation, which might

include WNP-1's market value, capitalized earnings, original cost, reproduction cost or salvage value, or a combination of these. Depending on the theory of valuation used, the amount of just compensation could vary significantly.

Quality of Title to WNP-1

The authors also concluded that the judgment in any condemnation action will pass "clear" title (free of the previous owner's WNP-1 liabilities) to DOE. We believe that DOE's successful completion of the legal process involved in obtaining WNP-1 would likely provide DOE with clear title.

One of the purposes for the legal process to obtain WNP-1 would be to hear and dispose of any claims against WNP-1 that might be carried forward to the new owner, in this case DOE. The authors pointed out that DOE would condemn the WNP-1 physical structure, and although bonds were used to construct WNP-1, these bonds are secured by WNP-1 power sale revenues and not the physical structure. Under the Net Billing Agreement giving BPA the rights to WNP-1's power, BPA is obligated to pay the WNP-1 bond debt service whether WNP-1 is finished and operates or not. Thus, while the Supply System may continue to have obligations to WNP-1 bond holders and BPA would remain obligated to pay any remaining WNP-1 bond debt service after DOE acquires WNP-1, these obligations most likely would not be passed on to the condemning party, DOE.

ACQUISITION COST FOR WNP-1 DIFFICULT TO PREDICT

In our opinion, the authors of the study present a fairly accurate picture of the common methods of valuation that a court may consider in assessing the value of WNP-1 in a condemnation proceeding. The authors note that the court may consider a combination of these approaches or develop its own unique valuation method to reach a just and fair compensation for WNP-1. The authors of the study apply what they believe may be a likely method to reach the study's suggested maximum value (\$450 million) and, according to the authors, the more likely value of \$30 to \$150 million for WNP-1. Although these specific values may be plausible, it is difficult to predict with any accuracy how a court might determine the value of WNP-1 because of WNP-1's unique and complex ownership and liability situation.

Method for Determining Just Compensation

The government's power to take property for public use without the owner's consent (i.e., eminent domain) is limited by the just compensation clause of the Fifth Amendment of the Constitution that provides, in pertinent part, that no ". . . private property [shall] be taken for public use, without just compensation." The

Supreme Court has stated that the underlying principle of just compensation is that the owner "is entitled to be put in as good position pecuniarily [financially] as if the property had not been taken." The Supreme Court has developed a number of "working rules" and "practical standards" to determine what is a full equivalent of the property taken. Foremost among these working rules is the general guide that just compensation normally is to be measured by "the market value of the property at the time of taking contemporaneously paid in money." The market value, or fair market value, entitles the owner to receive "what a willing buyer would pay in cash to a willing seller at the time of taking." The Supreme Court chose market valuation to strike a fair balance between the public's need and the property owner's loss. However, the Supreme Court has indicated that just compensation valuation methods other than market value are appropriate "when market value has been too difficult to find, or when its application would result in manifest injustice to owner or public"

Although no rigid techniques exist for determining just compensation, courts have generally employed the following methods of valuation in condemnation proceedings:⁵

- Comparable sales approach when the tract is one in an active commercial market. This method is usually used for property often sold, such as houses, raw land, and undeveloped natural resources.
- Capitalization of earning for income-producing properties. This is usually used for property such as office and apartment buildings.
- Reproduction or replacement costs (with or without depreciation). This method is usually used for property with special uses, such as hospitals, churches, schools, roads, and public buildings.

The comparable sales approach and the capitalization of earnings method are designed to reach the fair market value of the property. Courts have often held that sales of comparable properties provide the best evidence of fair market value. The capitalization of earnings method is used when income-producing potential is a key element in market value. Under this method, the value of a particular piece of property is shown by calculating the present value of the income the property could be expected to generate over its useful economic life.

On the other hand, the reproduction or replacement cost approach is used when the property has no fair market value (e.g.,

⁵See, J. Gelin and D.W. Miller, The Federal Law of Eminent Domain (1982) and cases cited therein.

property that is seldom traded) or when some method other than market value is appropriate. This approach produces a valuation estimate by establishing the cost to replace the property, less depreciation, at a different but comparable site. Although the replacement method is often considered when property has no fair market value, courts have generally not favored this approach because it often results in unrealistically high valuations and it frequently cannot be established that the property can or will be replaced.

While the methods discussed above are the ones most often used to determine just compensation, courts may use any method or combination of methods that the court believes is just and equitable in the situation under consideration.

Study Authors Opinion on Just Compensation for WNP-1

The authors of the WNP-1 study concluded the following:

"WNP-1 presents a unique and complex valuation problem which does not lend itself to analysis under the traditional methods of valuation. There appears to be no readily ascertainable market for unfinished nuclear plants. The plant is not in operation and consequently does not have an income stream upon which to determine a going concern. It is uncertain whether the plant will ever come into operation and have value in excess of its salvage value. Therefore, none of the traditional methods of valuation provides a clear measure of compensation, with the possible exception of salvage value."

On the basis of our review of the law of eminent domain, we would agree that the condemnation of WNP-1 presents a unique factual situation that may not lend itself to the usual methods of valuation.

Having concluded this, the authors go on to present a fairly accurate picture of the common methods of valuation that a court may consider in assessing the value, but again note that the court may consider a combination of these approaches or develop its own unique valuation method to reach a just and fair compensation for WNP-1.

Fair Market Value

The authors note that a court must first determine whether there is a market for WNP-1. This analysis would take into consideration the current condition of the plant, its likelihood of completion, and its possible alternative uses. The court may consider the plant's salvage value, and although the authors of the

WNP-1 study believe that this may be the only reasonable approach to determine WNP-1's value, they also point out that salvage value would only be used as a measure of compensation if it would not result in unfair treatment of the Supply System.

Reproduction Cost

The authors indicate that reproduction (replacement) cost less depreciation has been used as a valuation method when there is no market for property and the property owner wants or needs to relocate. The authors note that the Supply System is under no obligation to relocate. Moreover, the authors state that while the replacement method may best approximate the value of WNP-1 to DOE because the special purpose structure can be adapted to its need, just compensation generally is measured by property loss to the owner and not gain to the taker. The authors suggest that a variation on the replacement methodology that may be argued for valuing WNP-1 is the cost to BPA to replace the power it would produce less the cost of competing WNP-1.

Our review indicates that the replacement cost method generally is not appropriate when the owner has no need or obligation to replace the facility. Moreover, the Supreme Court has stated that if a fair market value can be ascertained, it should be used as a measure of just compensation rather than replacement value.

Finally, although the Supply System is the owner of WNP-1, BPA owns the plant's electric-power output, and in accordance with the WNP-1 Net Billing Agreement, is obligated to pay the total annual cost of the plant, including debt service on the WNP-1 bonds. Thus, as the study authors have stated, a court may determine the value of the plant with reference to BPA, i.e., the cost to BPA of replacing the power that WNP-1 was to produce less the cost of completing WNP-1. However, if a court were to adopt this method, it probably would also consider that the government's new use of WNP-1 will most likely include producing power as a by-product to be used by BPA.

Original Cost Less Depreciation

According to the authors, this approach has been used with regard to the condemnation of public facilities that provide a public service but at a financial loss. The authors conclude that this is not the case for WNP-1, since it is not functioning and provides no essential public service.

We found that courts have used original cost less depreciation in situations in which compensation based on salvage value would be inequitable. However, some courts have referred to original costs as the "false standard of the past," since the original costs of the facility may not reflect its present value.

Going Concern Value--Intangible Assets

The authors state that another possible valuation method that a court might use includes the capitalization of the income stream from a going concern. However, the authors conclude that WNP-1 is not a going concern (not operating) and the government's planned use of the facility will only produce power as a by-product.

We found that generally capitalization of earning value would be inapplicable for a facility that is not in operation. However, in this case, the court, in order to arrive at a fair and equitable compensation, may consider that DOE's use of the plant will, in most likelihood, result in the generation of power. In addition, as the authors state, the court may also consider a value for the Supply System's intangible assets if these assets, such as records, will in some way be transferred to DOE.

Authors' Calculation of Value of WNP-1

The authors calculated the net value of WNP-1 (i.e., comparative value of WNP-1's power sales over its lifetime less completion costs) to be approximately \$450 million if it were completed and operating by the year 1996.⁶ The authors use this amount as the upper limit in the study's suggested legislation to authorize funds for DOE to acquire WNP-1. The authors then calculate a value for WNP-1 that they believe is more likely to be closer to a court-determined value for WNP-1. This more likely value, according to the authors, would consider the likelihood of WNP-1's being either terminated or completed. For example, the authors state that if the court finds an 80-percent chance of a termination of WNP-1 and a 20-percent chance of a completion,⁷ the condemnation award is likely to be between \$30 million (the salvage

⁶The estimate was actually made by PNL, which employed the authors to do the WNP-1 legal study. The authors and PNL consider the estimate to be conservatively high because it assumes, among other things, a higher level of demand for power (by the completion date of 1996) than most current projections (high enough to warrant the Supply System's finishing WNP-1); and it contains no consideration of the fact that BPA (i.e., the federal government) already owns the power-generating capability of WNP-1.

⁷According to DOE Richland officials, the authors' 80-percent probability of termination and 20-percent probability of completion estimates were obtained from BPA studies of WNP-1.

value) and an upper limit of \$150 million.⁸ Although the author's conclusion may be plausible, we again point out, as the authors have, that it is difficult to predict with any accuracy how a court might determine the value of WNP-1 and, depending on the method used, the value of WNP-1 could vary significantly.

TIME REQUIRED FOR ACQUISITION

The authors of the study estimate that DOE could acquire WNP-1 through a condemnation action in 2 years or less, and, in fact, they believe this condemnation action is more likely to require about 1 year to complete. The authors explained that the litigation will be filed in the U.S. District Court for the Eastern District of Washington State and that conversations with private attorneys and the U.S. Attorney for the Eastern District "indicate that the entire proceeding should not take longer than 1 year." In addition, the authors have included suggested legislation that gives any litigation directed at or involving DOE on this matter priority over other civil cases in the federal courts.

A representative of the U.S. Attorney's Office for the Eastern District of Washington told us that the WNP-1 condemnation action would probably take about 1-1/2 to 2 years, not including any appeals. He told us that appeals might add as much as 2 more years to the process. The authors concede that appeals would add time to the acquisition process, and have tried to avoid this additional time by including suggested specific legislation authorizing "DOE to acquire title to WNP-1 after entry of the trial court's judgement," and thus, before any legal appeals.

OTHER ISSUES INVOLVED WITH THE STUDY

This section discusses the comment of the study's authors on the legality of converting the partially completed WNP-1 commercial reactor to a production reactor and also discusses the legislation that the authors included as part of their WNP-1 study.

Conversion of WNP-1 Not Likely to Violate Nonproliferation

Although it was not an objective of the cited study to determine the legality of converting WNP-1, the authors commented

⁸The authors took 80 percent of \$43 million (the estimated termination value in 1996) plus 20 percent of the \$450 million completion value, for a total of \$124 million. They then rounded this up to \$150 million and stated that the condemnation award is likely to range between \$30 million (the salvage value) and \$150 million.

that DOE's conversion of WNP-1 to a nuclear materials production reactor would not violate the Nuclear Non-Proliferation Treaty.⁹ It is also the position of the U.S. Arms Control and Disarmament Agency, and the State Department, that the United States is not "precluded by treaty obligation or domestic law" from converting an incompleated commercial nuclear power reactor to a defense production reactor. In our two September 1988 reports, we noted our agreement with this position.

The Non-Proliferation Treaty, which went into effect on March 5, 1970, does not impose any limitations on the domestic activities of nuclear weapons states that are parties to the treaty, such as the United States. Thus, it is our opinion that the treaty would not prohibit or restrict the conversion of WNP-1 to a defense production reactor. However, as we stated in our September reports, we also believe that such a proposed conversion may raise policy questions for the Congress. For example, the proposed conversion appears to blur the traditional, albeit not absolute, separation between peaceful uses of atomic energy and military use and, as a result, may be criticized on policy grounds.

Suggested Legislation Helps Support Acquisition and Conversion of WNP-1

The authors have drafted and appended to their study "a Bill to authorize the acquisition of WNP-1 by DOE for modification and completion as a defense production reactor in prompt economical fashion." Specifically, the stated purpose of the suggested legislation is "to authorize the acquisition, construction, completion and operation of two nuclear reactors for national defense and other purposes." The authors of the WNP-1 study concede that their analyses, and therefore their conclusions with regard to acquisition and conversion of WNP-1, are based in large part on the assumption that the Congress would pass the authors' suggested legislation. However, we cannot predict whether the Congress would support this or similar legislation regarding the acquisition and conversion of WNP-1.

The study's proposed legislation contains, among other things, language to

- modify and complete the WNP-1 as a nuclear production reactor at the Richland/Hanford facility, and also create a nuclear production reactor at DOE's reservation at Savannah River, South Carolina;

⁹PNL hired International Energy Associates to do the nonproliferation assessment as part of the overall Richland WNP-1 initiative.

- limit the price to be paid for WNP-1 to no more than \$450 million;
- take title of WNP-1 after entry of a judgment of \$450 million or less in a condemnation action (and before any appeals that might occur);
- have BPA pay back to the U.S. Treasury through revenues from its customers and ratepayers an amount equal to any reduction in BPA's annual obligation with respect to debt service on the WNP-1 bonds;
- specify parameters for satisfying the National Environmental Policy Act, including preparation of an environmental impact statement to take place while acquisition is in progress and be completed no later than the date that the Secretary of Energy and the Supply System enter into a binding contract for the sale of WNP-1 or the date that the Secretary pays the condemnation award; and
- give priority in federal courts to this matter over other civil matters.

CHRONOLOGY OF EVENTS REGARDINGRICHLAND WNP-1 STUDY

- Early May 1987 The Richland Manager goes to the DOE Strategic Management Planning Council and is frustrated that the group will not consider potential downside scenarios on production reactors (e.g., production might stop because of problems in existing production reactors). Upon return to Richland, the Manager decides to start a study to determine whether he can reduce the institutional, technical, and cost uncertainties regarding acquisition and conversion of WNP-1.
- May 12, 1987 Initial meeting of the Richland Manager, his staff, UNC Nuclear Industries (later WHC), and PNL on the WNP-1 study takes place.
- June 4, 1987 The WNP-1 study project is authorized, funded from UNC (later WHC) reactor operations management reserve.
- July 29, 1987 PNL and WHC present preliminary results of the WNP-1 study to the Richland Manager.
- Aug. 18, 1987 The Richland Manager (with PNL and WHC) briefs DOE headquarters Defense Programs staff.
- Aug. 19, 1987 PNL and WHC (without the Richland Manager) brief DOE headquarters General Counsel staff.
- Aug. 19, 1987 The Under Secretary calls the Richland Manager and tells him to brief the WNP-1 Steering Committee and keep the draft project results inside DOE. The Manager does not tell the Under Secretary of the scheduled congressional briefing.
- Aug. 20, 1987 The Richland Manager tells PNL and WHC that their use of DOE funds (to promote the WNP-1 study) is under DOE purview. However, he tells PNL and WHC that if they don't use DOE funds, then they are acting as private contractors, i.e., what they do as contractors is their own business.

- Aug. 21, 1987 The Richland Manager (with PNL and WHC) briefs a U.S. Representative from Washington State on the WNP-1 study results. The Richland Manager gives the U.S. Representative a copy of the draft study results.
- Sept. 3, 1987 The Richland Manager (with PNL and WHC and other WNP-1 study contractors) briefs the WNP-1 Steering Committee.
- Sept. 3, 1987
 through
Sept. 11, 1987 TRIDEC briefs Members of Congress, federal agency officials, and the Governor of Washington on the draft study results and distributes copies of the draft results.¹ A member of the law firm that conducted the WNP-1 study gives the President's Chief of Staff a copy of the draft study. The Richland Manager was aware of many of TRIDEC's, PNL's, and WHC's briefing activities.
- Sept. 14, 1987 A U.S. Senator and Representative from Washington State meet with the Secretary of Energy and give him draft copies of the WNP-1 study.
- Sept. 14, 1987 The Secretary directs the Under Secretary to order an IG investigation of the Richland Office's role in commissioning and distributing the WNP-1 study.
- Sept. 14, 1987 The Under Secretary calls the Richland Manager to tell him that an IG investigation will be requested.
- Sept. 14, 1987 The Richland Manager sends a letter to WHC and PNL saying that the release of documents without approval should not have occurred and is not acceptable.
- Sept. 17, 1987 Results of the WNP-1 study are officially issued.

Source: DOE IG Report, Dec. 3, 1987.

¹TRIDEC is a consortium of companies and businessmen in the Richland, Pasco, and Kennewick, Washington area. Some of the contractors and subcontractors on the WNP-1 study belong to TRIDEC.

SCOPE AND METHODOLOGY

To respond to the requester's questions, we interviewed officials at DOE headquarters, its Richland Operations Office, DOE contractors, the Supply System, and the Bonneville Power Administration. We also reviewed pertinent DOE, Supply System, Bonneville, and Northwest Power Planning Council reports and studies and used the results of previous GAO reports concerning WNP-1: Nuclear Science: Questions Associated With Completing WNP-1 as a Defense Materials Production Reactor (GAO/RCED-88-221, Sept. 21, 1988), Nuclear Science: Issues Associated With Completing WNP-1 as a Defense Materials Production Reactor (GAO/RCED-88-222, Sept. 21, 1988), and Nuclear Science: Effect of Conversion of Washington Nuclear Plant No. 1 on Debt and Electric Rates (GAO/RCED-89-88FS, Mar. 9, 1989). We also used the results of two IG reports on this matter: The Development of Certain Studies of Issues Regarding Acquiring the WPPSS WNP-1 Reactor for a Department of Energy Production Reactor (Dec. 3, 1987) and Richland Operations Office Procedures for Funding the WNP-1 Project Study and the Allowability of Associated Costs Incurred (Nov. 22, 1988). We performed the work for this briefing report between November 1988 and April 1989. We discussed the facts presented with cognizant DOE officials.

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